Amendments to the Claims

Please amend claims 1, 18 and 31.

1. (currently amended) A method for improving the quality of X-ray images generated by an X-ray imaging system, said X-ray system including an X-ray emitter and an X-ray detector, said method including the steps of:

positioning the patient between said X-ray emitter and said X-ray detector;

imaging the patient with a low-dose pre-shot to determine a low-dose image, wherein the radiation dose level of said low-dose pre-shot is less than the radiation dose level of a full-dose exposure;

analyzing the low dose image to determine the positioning of the patient relative to said X-ray emitter and said X-ray detector;

adjusting the positioning of the patient relative to at least one of said X-ray emitter and said X-ray detector; and

imaging the patient with a full-dose exposure.

2. (original) The method of claim 1 wherein said adjusting step includes adjusting the positioning of the patient and then re-imaging said patient with a second low-dose pre-shot prior to imaging the patient with a full-dose exposure.

3. (original) The method of claim 1 wherein said low-dose pre-shot has a dose of less than 10 percent of said full-dose exposure.

4. (original) The method of claim 1 wherein said low-dose pre-shot has a dose of less than 4 percent of said full-dose exposure.

5. (original) The method of claim 1 wherein said X-ray system includes X-ray imaging parameters and said X-ray imaging parameters vary between said low-dose pre-shot and said full-dose exposure.

6. (original) The method of claim 5 wherein said X-ray imaging parameters are varied according to one of patient size and anatomical view.

7. (original) The method of claim 1 wherein the X-ray system is controlled by a technician from a remote acquisition console.

8. (original) The method of claim 1 wherein the X-ray system is controlled automatically.

9. (original) The method of claim 1 wherein said low-dose pre-shot generates an image within 5 seconds.

10. (original) The method of claim 1 wherein said low dose pre-shot generates an image within one second.

11. (original) The method of claim 1 wherein said step of imaging the patient with a low-dose pre-shot includes imaging the patient with a low-dose X-ray imaging sequence.

12. (original) The method of claim 11 wherein said low-dose imaging sequence occurs at a frame rate of approximately 5 frames per second.

13. (original) The method of claim 11 wherein said low-dose imaging sequence occurs at a frame rate of approximately 1 frame every 5 seconds.

14. (original) The method of claim 7 wherein the X-ray images in the X-ray imaging sequence are sub-sampled prior to processing.

15. (original) The method of claim 14 wherein the X-ray images of the X-ray imaging sequence are sub-sampled using binning.

16. (original) The method of claim 14 wherein the X-ray images of the X-ray imaging sequence are sub-sampled using sparsing.

17. (original) The method of claim 1 wherein said analyzing step further includes automatically analyzing said low-dose image using a computer algorithm.

18. (currently amended) A method for verifying the positioning of a patient in an X-ray imaging system before imaging the patient with a full-dose X-ray exposure including the steps of:

positioning the patient in the X-ray system;

imaging the patient with a low-dose pre-shot, wherein the radiation dose level of said low-dose pre-shot is less than the radiation dose level of a full-dose exposure; and

verifying the positioning of the patient in the X-ray system via the low-dose pre-shot image before imaging the patient with a full-dose X-ray exposure.

19. (original) The method of claim 18 wherein said verifying step includes adjusting the positioning of the patient and then re-imaging said patient with a second low-dose pre-shot prior to imaging the patient with a full-dose exposure.

20. (original) The method of claim 18 wherein said low dose pre-shot uses a dose of 1 to 4 percent of the dose of the full-dose exposure.

21. (original) The method of claim 18 wherein the X-ray system is controlled by a technician from a remote acquisition console.

22. (original) The method of claim 18 wherein said low-dose pre-shot generates an image within 5 seconds.

23. (original) The method of claim 18 wherein said low dose pre-shot generates an image within one second.

24. (original) The method of claim 18 wherein said step of imaging the patient with a low-dose pre-shot includes imaging the patient with a low-dose X-ray imaging sequence.

25. (original) The method of claim 24 wherein said low-dose imaging sequence occurs at a frame rate of approximately 5 frames per second.

26. (original) The method of claim 24 wherein said low-dose imaging sequence occurs at a frame rate of approximately 1 frame every 5 seconds.

27. (original) The method of claim 24 wherein the X-ray images in the X-ray imaging sequence are sub-sampled prior to processing.

28. (original) The method of claim 27 wherein the X-ray images of the X-ray imaging sequence are sub-sampled by binning.

29. (original) The method of claim 27 wherein the X-ray images of the X-ray imaging sequence are sub-sampled by sparsing.

30. (original) The method of claim 18 wherein said verifying step includes automatically verifying said low-dose image using a computer algorithm.

31. (currently amended) A method for improving the quality of X-ray images generated by an X-ray imaging system, said method including the steps of:

positioning a patient in the X-ray system;

imaging the patient with a low-dose pre-shot, wherein the radiation dose level of said low-dose pre-shot is less than the radiation dose level of a full-dose exposure; and

processing the low-dose pre-shot image to provide imaging parameters to be employed during a subsequent X-ray exposure.

32. (original) The method of claim 31 wherein said processing step includes providing zero point parameters.

33. (original) The method of claim 31 wherein said processing step includes providing saturation management parameters.

34. (original) The method of claim 31 wherein said processing step includes providing field of view optimization parameters.

35. (original) The method of claim 31 wherein said processing step includes providing spatial physical filter parameters.